

QWEST Teachers and Technology grant winners

Teacher(s)	School	District	ESD	Grade(s)
Caleb Kenison	Cheney Middle School	Cheney	101	8
Eric Miller	Eckstein Middle School	Seattle	121	6
Corey Louviere, Janet Woodward	Garfield High School	Seattle	121	9-12
Jerri Ann Patten	Kelso High School	Kelso	112	9-12
Christine Forslund	Kulshan Middle School	Bellingham	189	6
Debbie Blodgett- Goins	Martin Luther King, Jr. Elementary School	Yakima	105	4
Tony Kern	Moses Lake High School	Moses Lake	171	9-12
Laurie A. McGovern	Pioneer Primary School	Pioneer	113	3
Martha Lennier, Sara Schultz, Dana Persson- Zora, Sheryl Woodruff	Stevens Elementary School	Aberdeen	113	4-6

Caleb Kenison Cheney Middle School, Cheney School District

An \$80 million dollar capital bond project to build two state-of-the-art middle schools in Cheney Washington is about to bring an exciting 21st century learning project to life. Caleb Kenison's 8th-graders will be working alongside architects, construction professionals, city and county officials, educators and the community to design the new schools. They will gather an enormous amount of measurement and survey data, learn about the complexity of a school structure and find out how permitting and environmental considerations shape the design of buildings.

Students will model their new schools with [3D renderings](#) that must undergo professional and community review. Kenison expects his young building designers to build real-world expertise as communicators, collaborators and members of project team with a budget and deadline. Links to the student-produced videos of this project on www.teachertube.com will be available when it's complete.

Said Cheney Middle School Principal Mike Stark, "A critical component of the design and programs of our new schools is student voice ... This class will be an excellent way for students to connect their learning in the classroom to a real-world scenario. They will have access to the project construction site and to the lead architect throughout the design and construction phases. We are excited and hopeful that the [Qwest] grant can make this dream a reality for our students."

Eric Miller
Eckstein Middle School, Seattle Public Schools

Social justice, the environment, energy and public health are just four of the topics that Miller's sixth-grade class will take on as they work toward the learning goals outlined for their Heroes of Africa project. Miller's students will learn about Africa today through research, data gathering, interviews, reflection and collaboration. Following an in-depth analysis, they will design multimedia products that interpret and communicate what they've learned about the continent, and what they think will help to solve its societal, industrial and environmental problems.

Miller teaches a full inclusion program: he will organize students into heterogeneous teams that comprise those who are academically strong as well as students who are struggling with reading disabilities and those who are hearing impaired. He has integrated several subject areas, including geography, history, social studies, reading and writing, into a project that will transform what his students understand about Africa, its past and its place in the world today.

Miller would like his students to model their approach on a real-world Web project called [Ushahidi](#), a Web site [mash up](#) that publishes firsthand reports by people at the center of civil strife and disaster. The site launched during the post-election violence in Kenya in 2008 as people emailed or texted information from the streets, which the site aggregated instantly into an interactive map. "By leveraging the power of mobile technology and the social Web, a small group spoke to the entire world," Miller said.

Corey Louviere and Janet Woodward
Garfield High School, Seattle Public Schools

An ambitious photo exhibit project will engage Louviere and Woodward's classes in an exploration of the history and culture of Seattle's Central Area. Garfield High School, built in 1922, is one of many historical landmarks whose providence depicts a long, community narrative they plan to research. Students will document the multi-cultural topography of the area, where six bus lines converge, and the rich diversity of its neighborhoods, commercial and community centers speak to the unique character of the area's people and urban lifestyle.

In a series of field trips, students will photograph specific scenes, take notes and interview residents. Each student will select his or her best image for the exhibit and prepare statements that interpret the photograph and its context. Designed for peer review, project activities will have students develop rubrics that evaluate the quality of the images and the accompanying text, uploading their work and comments to a communal Web site. The best 20 photographs will be curated for public exhibit in museums, libraries and community centers and shown with an accompanying catalogue.

Louviere and Woodward have integrated academic standards from language arts, CTE subjects, the arts and media literacy. They feel strongly about the value of an inquiry-based learning project. In their application, the teachers wrote: "The goal of this unit is to examine, identify and define authentic problems and significant questions for investigation, and to plan strategies that guide inquiry, construct meaning and communicate information ... [The project] incorporates instructional skill modalities that use oral, verbal, written and tactile methods for our diverse participants. Students...will engage in each

modality individually — collaborating and producing a final piece by working at their own pace, learning from others and meeting deadlines.”

Jerri Ann Patten
Kelso High School, Kelso School District

In a district where more than one third of high school freshmen read below grade level, Patten has designed a learning project to boost reading comprehension and critical thinking. Organizing her students in reading teams with measurable goals, she will introduce [e-readers](#) that make it possible to mark-up text and look up words easily.

Working collaboratively, her students will establish an academic network on [Ning](#) to share literary observations and criticism but also as a space in which students take on the persona of a book character and give that character new life and expression.

The collaboration will encourage students to connect deeply to the text, construct new knowledge and take into account commonly felt understandings of the author’s ideas. Ambitious learning goals — analyze story elements, determine the effectiveness of the book’s literacy devices, evaluate books and authors to share with others — parallel the challenging 21st century skills she will encourage in her students: communication, collaboration, innovation. At a reading fair, Patten’s students will share their projects with the community.

Patten has designed a comprehensive assessment strategy. “The written exams will measure comprehension but the blog entries and answers to forum questions, inventories and their own reflections should provide anecdotal evidence to evaluate the effectiveness of the e-readers,” she said. “I expect a higher percentage of students to read the required book and all students to participate in the reading teams ... I also hope that students will self-determine that their reading comprehension increased because they had ready access to vocabulary assistance and a place to take notes electronically as they read.”

Christine Forslund
Kulshan Middle School, Bellingham School District

A deep engagement with, and understanding of, scientific concepts set the goals of a vigorous learning project designed by a teacher who believes in connecting with what students already know and helping to uncover the science behind their ideas, observations and discoveries.

Forslund’s young scientists will learn how measure [abiotic](#) factors, such as light, pH, temperature and gas levels, and then analyze how these non-living factors influence our environment. She has integrated a wide range of the state’s standards for science and technology in ways that provide a rich and diverse series of challenging learning activities.

Students will start with a problem defined by authentic conditions, conduct an investigation by collecting data and then learn how to use that data to construct a basic understanding of how abiotic elements behave. They will create reports that describe the beginning inquiry and present results with

supporting evidence. As peers they will work through each investigation to a viable solution. Forslund's partnerships with community-based educational programs — Nooksack Salmon Enhancement Association, Re-Sources, Puget Sound Energy, Snow Goose Marine Science — will bring her students out to the field to expand their understanding through firsthand observation and experience.

Forslund believes this project will be an important learning experience to share with her colleagues. "I plan to meet regularly with the Kulshan Science Department teachers to expand their technical skill sets for collecting, recording and sharing data," she said. "Our plan is to vertically align lessons from 6th through 8th grade that will enable all students to integrate technology to gather accurate data and organize data to make models and valid interpretations."

She is also an active member of the district technology team. "Our task is to identify and select lessons where it makes sense to include technology and align the experiences across content areas and through grade levels."

Debbie Blodgett-Goins
Martin Luther King, Jr. Elementary School, Yakima School District

An in-depth study of Washington state is the framework for a dynamic social studies project that integrates learning goals in reading and science. Beginning with essential questions from the state's social studies classroom-based assessments and curricula aligned to the learning objectives, Blodgett's fourth-graders will gather facts, artifacts, sources and evidence related to topics of interest they choose themselves. They will pursue inquiries such as describing how history impacts the world today, describing how geography impacts our quality of life and explaining ways citizens work together to make positive differences in a community.

Students will compile digital compendiums of what they discover (a change from the paper-in-a-shoe box compilations they have today), blog about their findings and connect with outside experts online. To demonstrate what they know and can do, each student will produce a multimedia project that presents new expertise.

Blodgett seeks to cultivate lifelong learners. "My vision is a classroom engaged in challenging, authentic and intellectual work, using technology in ways that powerfully advance learning," she said. "In this age, all people are faced with a barrage of information that they must be able to locate, synthesize and use ... [They] can gather perspectives from innumerable sources." She believes that "every child should be reaching out to the world beyond their own neighborhood and school. By using technology effectively, ours will become a classroom of 29 experts, not one teacher and 28 learners."

Tony Kern
Moses Lake High School, Moses Lake School District

With the help of Moses Lake High School students, the Washington State Bass Federation and the Department of Fish and Wildlife to expand the declining fish population in Potholes Reservoir. At this point in the project, students have built and submerged hundreds of fish habitat boxes that enable a growing [fry](#) population to thrive. These young fish provide an adequate and sustainable food source

and, since their appearance, seem to have had a beneficial effect on the fish in the reservoir. However, no data exists that could verify this empirical evidence.

That's where Kern's students come in. At the outset, he will mobilize more than 200 students to handle the fish counts, and gather critical data from GPS devices, aerial photos and topographic maps. The class will use that data to create layered GPS documentation for professional biologists. This aggregation of data and its analysis will drive state-level decision-making about the use and stewardship of the reservoir and has a direct commercial benefit for the Moses Lake community. For Kern's students, these learning activities complete a real-world project that many of them have been working throughout high school.

Fully integrated with core CTE standards, Kern sees a rich future for these kinds of projects. "There are many opportunities for upcoming projects using the equipment, training and software that the Qwest grant will provide," he said. "Some of the projects include tracking sand dune migration in the Columbia Basin Wildlife Desert Unit, tracking noxious weed migration on the upper Crab Creek drainage [area] and studying bank erosion along Moses Lake...With the partnerships that are being formed with the bass federation and Bureau of Land Reclamation, the potential for expansion of this project or starting new projects using GPS and GIS technology is unlimited."

Laurie A. McGovern
Pioneer Primary School, Pioneer School District

What is the relationship among animals, ecosystems and human beings? McGovern's third-graders are about to find out through a learning project called "Eye on Hood Canal." The project will connect McGovern's students directly to community-based biologists, businesses and classroom peers.

McGovern's partnerships with the University of Washington and Taylor Shellfish have already transformed her classroom from the limits of bricks-and-mortar to the endlessly diverse and bountiful beaches of the Hood Canal waterway. Focused on state learning standards in science, social studies, math, communication and technology, students will record animal behavior and identify tidal zone organisms; they will collect a rich database of information about water quality, shellfish counts, tide measurements and animal varieties.

Online journals will record their observation and ideas about the ecosystem. Once they graph, analyze and interpret this new knowledge, students will produce videos and podcasts that demonstrate what they've learned and draw conclusions for community action. We'll be able to see these projects on the school Web site, as will more of McGovern's community partners — businesses, organizations and other classrooms.

McGovern believes in the power of collaborative learning that links students directly to the dynamics of the real world. "Empowered by their explorations and technology use, my third-graders will understand the usefulness of technology tools in the real world," she said. "As my students' awareness and knowledge grows, they too may become good stewards of the Hood Canal Watershed and help preserve it for many years to come."

**Martha Lennier, Sara Schultz, Dana Persson-Zora and Sheryl Woodruff
Stevens Elementary School, Aberdeen School District**

Continuity and educational achievement are hard won at Stevens Elementary where, by fourth grade, fewer than half of the students have been enrolled since kindergarten and 86 percent qualify as low income.

That doesn't daunt a dedicated team of teachers who are determined to level the playing field for these students with academic achievement. This creative teaching team — Martha Lennier, Sara Schultz, Dana Persson-Zora and Sheryl Woodruff — have designed an inquiry-based project that asks an important question for Stevens Elementary students and teachers: where would be a good place to build a new school? There is the only school in the district that hasn't been replaced or remodeled in the last ten years.

Each grade-level will tackle a different element of the problem. Sixth-graders will do the research, estimate square footage, create surveys and gather data. Fifth-graders will take on the environment impact and mitigation issues. Fourth-graders will create a working map and figure out where to locate the new buildings. And, an 8th-grade science class will mentor the field research.

The team envisions a real-world learning experience that leverages outside experts and the tools professionals use to solve problems and communicate issues. In their application the teachers wrote, "Effective technology usage must engage our students in authentic, active learning, be cross-curricular, give students opportunities to share work and have it evaluated by others ... [We can] differentiate instruction thus addressing ability levels, learning styles and, more importantly, the interest areas of the learner."